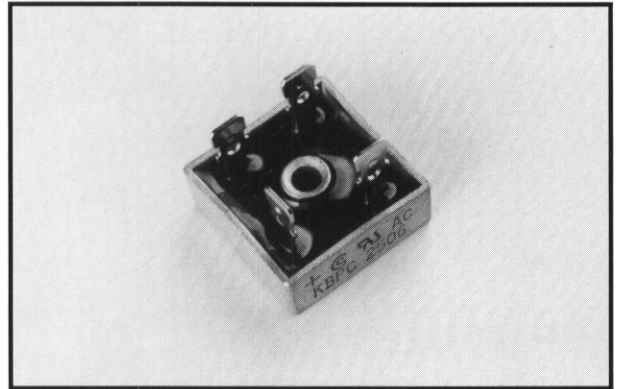




# KBPC25005 Thru KBPC2510

## 25 AMP SILICON BRIDGE RECTIFIER



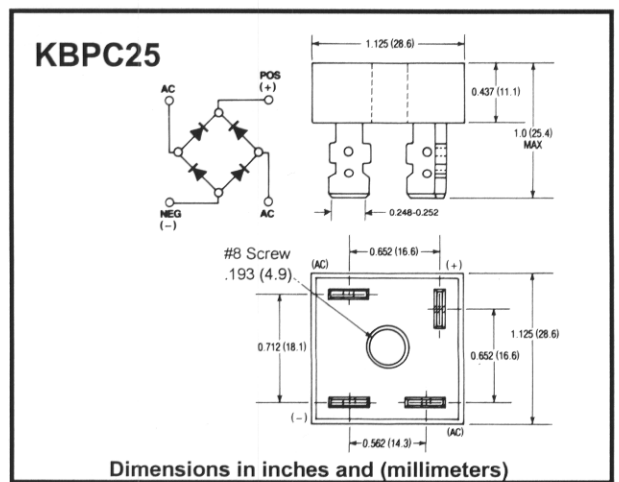
### FEATURES

- Rating to 1000V PRV
- 300 Amperes surge capability
- High efficiency
- Electrically isolated metal case for maximum heat dissipation
- UL recognized: File #E106441

### Mechanical Data

- Case: Metal
- Mounting: Through hole for #8 screw
- Weight: 1.1 ounce, 31.6 grams

### Outline Drawing



### Maximum Ratings & Characteristics

- Ratings at 25° C ambient temperature unless otherwise specified
- Single phase, half wave, 60Hz, resistive or inductive load
- For capacitive load, derate current by 20%

|   |                   | KBPC<br>25005 | KBPC<br>2501 | KBPC<br>2502 | KBPC<br>2504 | KBPC<br>2506 | KBPC<br>2508 | KBPC<br>2510 | Units            |
|---|-------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>  | 50            | 100          | 200          | 400          | 600          | 800          | 1000         | V                |
| Maximum RMS Voltage   | V <sub>RMS</sub>  | 35            | 70           | 140          | 280          | 420          | 560          | 700          | V                |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>   | 50            | 100          | 200          | 400          | 600          | 800          | 1000         | V                |
| Maximum Average Forward Output Current @ T <sub>C</sub> = 55°C  | I <sub>(AV)</sub> | 25.0          |              |              |              |              |              |              | A                |
| Peak Forward Surge Current<br>8.3 ms Single Half-Sine-Wave<br>Superimposed On Rated Load (JEDEC Method) | I <sub>FSM</sub>  | 300           |              |              |              |              |              |              | A                |
| Maximum Forward Voltage Drop per Bridge Element<br>At 12.5A DC  | V <sub>F</sub>    | 1.2           |              |              |              |              |              |              | V                |
| Maximum DC Reverse Current At Rated @ T <sub>A</sub> = 25°C   | I <sub>R</sub>    | 10            |              |              |              |              |              |              | μA               |
| Blocking Voltage per Bridge Element @ T <sub>A</sub> = 100°C  |                   | 1             |              |              |              |              |              |              | mA               |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)  | I <sup>2</sup> t  | 373           |              |              |              |              |              |              | A <sup>2</sup> S |
| Typical Thermal Resistance (Note 1)   | R <sub>THJC</sub> | 2.5           |              |              |              |              |              |              | °C/W             |
| Operating Temperature Range   | T <sub>J</sub>    | -55 to +125   |              |              |              |              |              |              | °C               |
| Storage Temperature Range   | T <sub>STG</sub>  | -55 to +150   |              |              |              |              |              |              | °C               |

Note: 1. Mounted on a 11.8 in<sup>2</sup> X 0.06 in thick (300mm<sup>2</sup> X 1.5mm thick) copper plate